

FITC anti-human CD45RO Antibody

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|--------------------------|---|
| Catalog# / Size | 304204 / 100 tests 304242 / 100 µg |
| Clone | UCL1 |
| Regulatory Status | RUO |
| Workshop | IV N31 |
| Other Names | CD45RO |
| Isotype | Mouse IgG2a, κ |
| Description | CD45RO is a 180 kD single chain membrane glycoprotein. It is a splice variant of tyrosine phosphatase CD45, lacking the A, B, and C determinants. The CD45RO isoform is expressed on activated and memory T cells, some B cell subsets, activated monocytes/macrophages, and granulocytes. CD45RO enhances both T cell receptor and B cell receptor signaling mediated activation. CD45 and its isoforms non-covalently associate with lymphocyte phosphatase-associated phosphoprotein (LPAP) on T and B lymphocytes. CD45 has been reported to be associated with several other cell surface antigens including CD1, CD2, CD3, and CD4. CD45 has also been reported to bind galectin-1 and CD22. CD45 isoform expression can change in response to cytokines. |

Product Details

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| Verified Reactivity | Human |
| Reported Reactivity | Chimpanzee, Cynomolgus, Common Marmoset |
| Antibody Type | Monoclonal |
| Host Species | Mouse |
| Immunogen | IL-2 dependent T cell line, CA1 |
| Formulation | µg size: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide. test size: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA). |
| Preparation | The antibody was purified by affinity chromatography, and conjugated with FITC under optimal conditions. |
| Concentration | µg size: 0.5 mg/ml test size: lot-specific |
| Storage & Handling | The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze. |
| Application | FC - Quality tested |
| Recommended Usage | Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis . For flow cytometric staining using the µg size, the suggested use of this reagent is ≤1.0 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application. For flow cytometric staining using the test sizes, the suggested use of this reagent is 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood. |
| Excitation Laser | Blue Laser (488 nm) |
| Application Notes | The UCL1 antibody is commonly used in combination with antibodies against CD45RA to discern memory and naïve T cells. Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue sections ⁵ and formalin-fixed paraffin-embedded tissue sections ⁴ , Western blotting ² , and immunoprecipitation ³ . |
| Application References | 1. Knapp W, <i>et al.</i> Eds. 1989. Leucocyte Typing IV. Oxford University Press. New York. (FC) |

(PubMed link indicates BioLegend citation)

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4. Yamada M, *et al.* 1996. *Stroke* 27:1155. (IHC)
5. Sakkas LI, *et al.* 1998. *Clin. Diagn. Lab. Immunol.* 5:430. (IHC)
6. Baba N, *et al.* 2010. *Int. Immunol.* 22:237. [PubMed](#)
7. Thakral D, *et al.* 2008. *J. Immunol.* 180:7431. (FC) [PubMed](#)
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9. Wu YY, *et al.* 2007. *Infect. Immun.* 75:4357. [PubMed](#)
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12. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
13. Smith SH, *et al.* 1986. *Immunology* 58:63. (Immunogen)
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Product Citations

1. Hess NJ, *et al.* 2020. *J Immunol.* 205:272. [PubMed](#)
2. Zeng W, *et al.* 2017. *Front Immunol.* 0.806944444. [PubMed](#)
3. Shi Z, *et al.* 2021. *Ann Clin Transl Neurol.* 8:43. [PubMed](#)
4. Elston L, *et al.* 2020. *Br J Haematol.* 188:872. [PubMed](#)
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6. Subrahmanyam P, *et al.* 2014. *J Immunol.* 193:2096. [PubMed](#)
7. Pu X, *et al.* 2018. *J Transl Med.* 16:328. [PubMed](#)
8. Fang F, *et al.* 2021. *Cell Rep.* 37:109981. [PubMed](#)
9. Tang J, *et al.* 2012. *Vaccine.* 30:1071. [PubMed](#)
10. Baba N, *et al.* 2010. *Int Immunol.* 1.08125. [PubMed](#)
11. Kim ML, *et al.* 2021. *iScience.* 24:103509. [PubMed](#)
12. Aalam F, *et al.* 2020. *PLoS Pathog.* 16:e1008968. [PubMed](#)

RRID

AB_314420 (BioLegend Cat. No. 304204)
AB_2564159 (BioLegend Cat. No. 304242)

Antigen Details

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|---------------------------|--|
| Structure | Tyrosine phosphatases, type I transmembrane, 180 kD (isoform of CD45 containing none of the A, B, or C determinants) |
| Distribution | Activated and memory T cells, B cell subsets, monocytes, macrophages, granulocytes |
| Function | Enhances TCR and BCR signaling |
| Ligand/Receptor | CD22 |
| Cell Type | B cells, Granulocytes, Macrophages, Mesenchymal Stem Cells, Monocytes, T cells, Tregs |
| Biology Area | Cell Biology, Immunology, Inhibitory Molecules, Neuroscience, Neuroscience Cell Markers, Stem Cells |
| Molecular Family | CD Molecules |
| Antigen References | 1. Thomas M. 1989. <i>Annu. Rev. Immunol.</i> 7:339. 2. Trowbridge I, <i>et al.</i> 1994. <i>Annu. Rev. Immunol.</i> 12:85. |
| Gene ID | 5788 |

Related Protocols

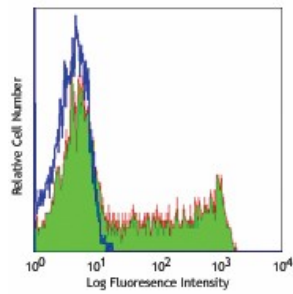
[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

APC anti-human CD45RO, FITC anti-human CD45RO, PE anti-human CD45RO, PE/Cyanine5 anti-human CD45RO, Purified anti-human CD45RO, Alexa Fluor® 488 anti-human CD45RO, Pacific Blue™ anti-human CD45RO, Alexa Fluor® 700 anti-human CD45RO, Biotin anti-human CD45RO, Brilliant Violet 421™ anti-human CD45RO, PerCP/Cyanine5.5 anti-human CD45RO, Brilliant Violet 570™ anti-human CD45RO, Brilliant Violet 605™ anti-human CD45RO, APC/Cyanine7 anti-human CD45RO, PE/Cyanine7 anti-human CD45RO, Brilliant Violet 650™ anti-human CD45RO, Brilliant Violet 711™ anti-human CD45RO, Brilliant Violet 785™ anti-human CD45RO, Alexa Fluor® 594 anti-human CD45RO, Purified anti-human CD45RO (Maxpar® Ready), Brilliant Violet 510™ anti-human CD45RO, PE/Dazzle™ 594 anti-human CD45RO, APC/Fire™ 750 anti-human CD45RO, PerCP anti-human CD45RO, TotalSeq™-A0087 anti-human CD45RO, TotalSeq™-B0087 anti-human CD45RO, TotalSeq™-C0087 anti-human CD45RO, Brilliant

Violet 750™ anti-human CD45RO, PE/Fire™ 640 anti-human CD45RO, TotalSeq™-D0087 anti-human CD45RO, Spark Violet™ 423 anti-human CD45RO, GMP APC anti-human CD45RO

Product Data



Human peripheral blood lymphocytes
stained with UCHL1 FITC

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